

ACCESS DB # \_\_\_\_\_  
PLEASE PRINT CLEARLY

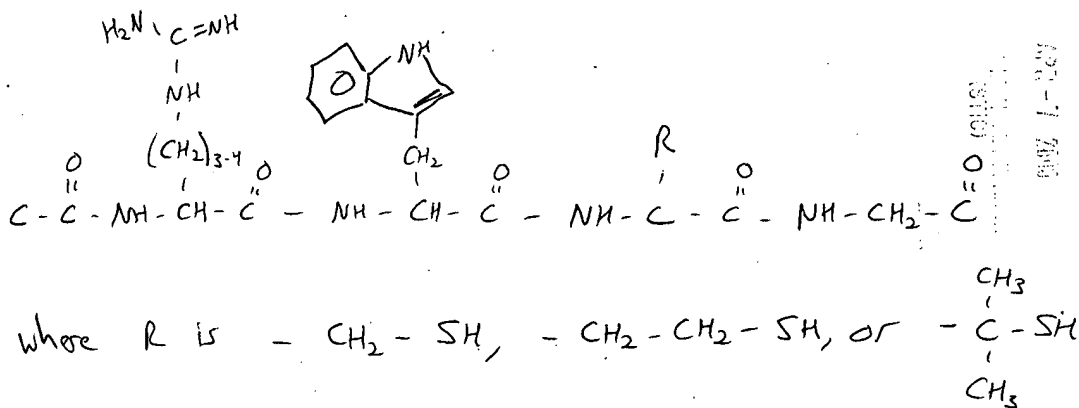
# SEARCH REQUEST FORM

10/674.516

**To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following:**

Earliest Priority Date: 9-10-2004

Please search the following partial structure:



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**Vendors and cost where applicable**

\_\_\_\_\_STN                      \_\_\_\_\_Dialog

\_\_\_\_\_ Questel/Orbit \_\_\_\_\_ Lexis/Nexis

           Westlaw                                 WWW/Internet

### In-house sequence systems

☐ Commercial      ☐ Oligomer      ☐ Score/Length  
☐ Interference      ☐ SP/DI      ☐ Encode/Transl  
 Other (specify) \_\_\_\_\_

Other (specify) \_\_\_\_\_

Online Time: \_\_\_\_\_ Other: \_\_\_\_\_

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FILE 'REGISTRY' ENTERED AT 17:29:29 ON 13 APR 2005

L1 STR  
 L2 2 SEA SSS SAM L1  
 D SCAN  
 L3 28 SEA SSS FUL L1

FILE 'HCAPLUS' ENTERED AT 17:33:34 ON 13 APR 2005

L4 7 SEA ABB=ON L3

FILE 'REGISTRY' ENTERED AT 17:40:43 ON 13 APR 2005

L5 STR  
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 L7 0 SEA SSS FUL L5  
 L8 STR L5  
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*10 compde from Reg.*

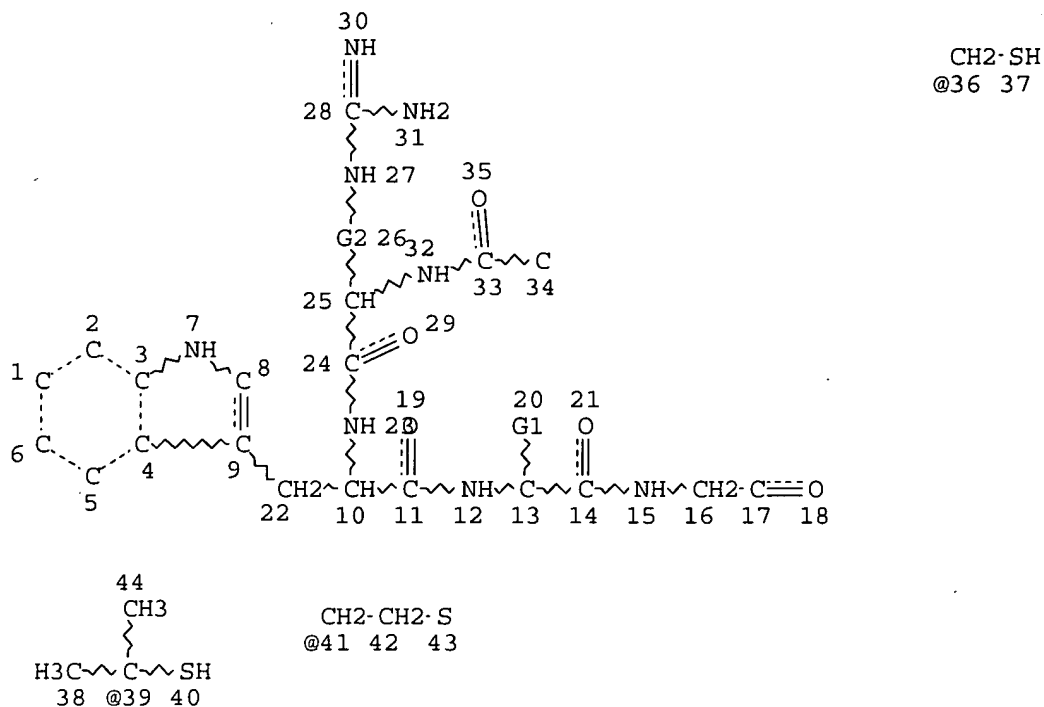
FILE 'HCAPLUS' ENTERED AT 17:57:13 ON 13 APR 2005

L14 22 SEA ABB=ON L13

*22 cite from CAPLus*

=> d que stat l14

L11 STR



VAR G1=39/41/36

REP G2=(3-4) C

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 44

STEREO ATTRIBUTES: NONE

L13 10 SEA FILE=REGISTRY SSS FUL L11

L14 22 SEA FILE=HCAPLUS ABB=ON L13

=&gt; d ibib abs hitstr l14 1-22

L14 ANSWER 1 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:1060669 HCAPLUS

DOCUMENT NUMBER: 142:34829

TITLE: Knockout identification of target-specific sites in peptides by serial substitution of conformationally restricted metal-complexed residues in metallopeptide analogs

INVENTOR(S): Sharma, Shubh D.; Shi, Yi-Qun; Bastos, Margarita; Rajpurohit, Ramesh; Cai, Hui-Zhi

PATENT ASSIGNEE(S): Palatin Technologies, Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 43 pp., Cont.-in-part of U.S. Ser. No. 464,117.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|---|------|----------|-----------------|----------|
| US 2004248212   | A1   | 20041209 | US 2004-769695  | 20040130 |
| WO 2002064734   | A2   | 20020822 | WO 2001-US50075 | 20011219 |
| WO 2002064734   | A3   | 20031120 |                 |          |
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| US 2005014193   | A1   | 20050120 | US 2003-464117  | 20030617 |
| WO 2004075830   | A2   | 20040910 | WO 2004-US2933  | 20040202 |
| W: AE, AE, AG, AL, AL, AM, AM, AM, AT, AT, AU, AZ, AZ, BA, BB, BG, BG, BR, BR, BW, BY, BY, BZ, BZ, CA, CH, CN, CN, CO, CO, CR, CR, CU, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EC, EE, EE, EG, ES, ES, FI, FI, GB, GD, GE, GE, GH, GM, HR, HU, HU, ID, IL, IN, IS, JP, JP, KE, KE, KG, KG, KP, KP, KR, KR, KZ, KZ, LC, LK, LR, LS, LS, LT, LU, LV, MA, MD, MD, MG, MK, MN, MW, MX, MX, MZ, MZ, NA, NI |      |          |                 |          |
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PRIORITY APPLN. INFO.:

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|-----------------|----|----------|
| US 2000-256842P | P  | 20001219 |
| US 2001-304835P | P  | 20010711 |
| US 2001-327835P | P  | 20011004 |
| WO 2001-US50075 | A1 | 20011219 |
| US 2003-444129P | P  | 20030131 |
| US 2003-464117  | A2 | 20030617 |
| US 2004-769695  | A  | 20040130 |

AB The invention provides methods for identification and determination of target-specific sites in peptides and proteins, including a method for determining the primary sequence of a secondary structure within a known parent

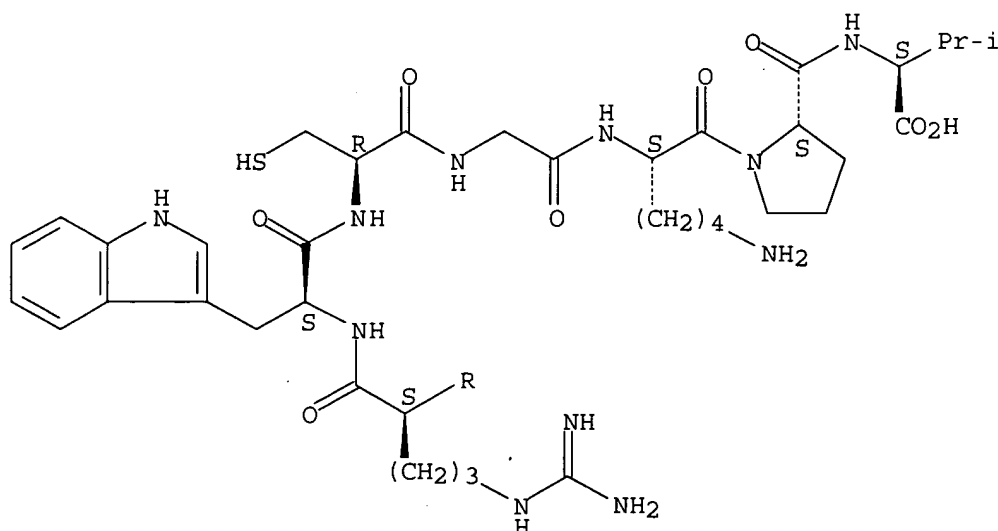
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IT      754240-34-1D, complex with rhenium metal ion 754240-92-1D
        , complex with rhenium metal ion
        RL: ARU (Analytical role, unclassified); BSU (Biological study,
        unclassified); ANST (Analytical study); BIOL (Biological study)
        (knockout identification of target-specific sites in peptides by serial
        substitution of conformationally restricted metal-complexed residues in
        metallopeptide analogs)
RN      754240-34-1 HCAPLUS
CN      L-Valine, L-seryl-L-tyrosyl-L-seryl-L-norleucyl-L- $\alpha$ -glutamyl-L-
        histidyl-L-phenylalanyl-L-arginyl-L-tryptophyl-L-cysteinylglycyl-L-lysyl-L-
        prolyl- (9CI) (CA INDEX NAME)

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Absolute stereochemistry.

PAGE 1-A



PAGE 2-B

OH

L14 ANSWER 2 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:740117 HCAPLUS  
 DOCUMENT NUMBER: 141:256945  
 TITLE: Knockout identification of target-specific sites in  
 peptides by serial substitution of conformationally  
 restricted metal-complexed residues in metallopeptide  
 analogs  
 INVENTOR(S): Sharma, Shubh D.; Shi, Yi-Qun; Rajpurohit, Ramesh;  
 Bastos, Margarita; Cai, Hui-Zhi  
 PATENT ASSIGNEE(S): Palatin Technologies, Inc., USA  
 SOURCE: PCT Int. Appl., 78 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 4  
 PATENT INFORMATION:

| PATENT NO.             | KIND   | DATE     | APPLICATION NO. | DATE        |
|------------------------|--|----------|-----------------|-------------|
| WO 2004075830          | A2   | 20040910 | WO 2004-US2933  | 20040202    |
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| RW:                    | BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG   |          |                 |             |
| US 2004248212          | A1   | 20041209 | US 2004-769695  | 20040130    |
| PRIORITY APPLN. INFO.: |  |          | US 2003-444129P | P 20030131  |
|                        |  |          | US 2004-769695  | A 20040130  |
|                        |  |          | US 2000-256842P | P 20001219  |
|                        |  |          | US 2001-304835P | P 20010711  |
|                        |  |          | US 2001-327835P | P 20011004  |
|                        |  |          | WO 2001-US50075 | A1 20011219 |

US 2003-464117

A2 20030617

AB The invention provides methods for identification and determination of target-specific sites in peptides and proteins, including a method for determining the primary sequence of a secondary structure within a known parent polypeptide that binds to the target of interest. A residue or mimetic containing a nitrogen atom and a sulfur atom available for binding to a metal ion is serially substituted for single residues in or inserted between adjacent residues in a known primary sequence of the peptide or protein. The resulting sequence is complexed with a metal ion thereby forming a metallopeptide with a conformationally fixed and predictable secondary structure of the residues involved in metal ion complexation. The resulting metallopeptides are then used in binding or functional assays related to the target of interest, and the metallopeptide(s) which result in significant or substantially decreased or changed binding or functionality are determined to identify the primary sequence involved in such binding or functionality. The method is exemplified by  $\alpha$ -MSH and bombesin analogs containing L-/D-cysteine insertions or substitutions complexed to the rhenium metal ion, and their binding to their resp. receptors.

IT **754240-34-1D**, complex with rhenium metal ion **754240-92-1D**, complex with rhenium metal ion

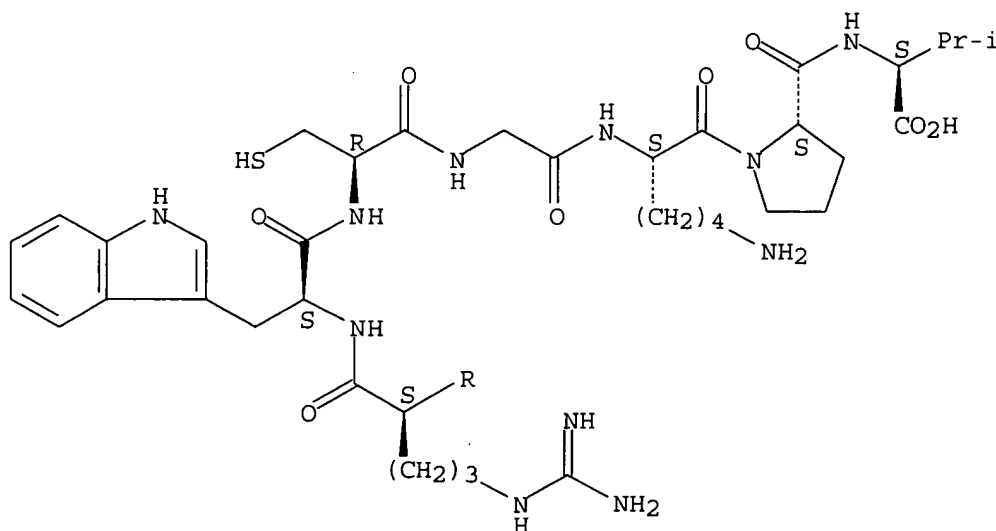
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study) (knockout identification of target-specific sites in peptides by serial substitution of conformationally restricted metal-complexed residues in metallopeptide analogs)

RN 754240-34-1 HCAPLUS

CN L-Valine, L-seryl-L-tyrosyl-L-seryl-L-norleucyl-L- $\alpha$ -glutamyl-L-histidyl-L-phenylalanyl-L-arginyl-L-tryptophyl-L-cysteinylglycyl-L-lysyl-L-prolyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 2-B

OH

L14 ANSWER 3 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:310865 HCAPLUS

DOCUMENT NUMBER: 140:332438

TITLE: Method of screening for peptides capable of specifically acting on biological membrane and the pharmaceutical activities of the peptides

INVENTOR(S): Machida, Sachiko; Tokuyasu, Ken; Matsunaga, Shigeru; Sakakibara, Yoshikiyo; Kobori, Masuko; Wen, Zhesheng

PATENT ASSIGNEE(S): Japan

SOURCE: U.S. Pat. Appl. Publ., 58 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

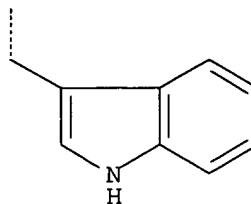
| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE       |
|------------------------|------|----------|-----------------|------------|
| US 2004072992          | A1   | 20040415 | US 2003-651563  | 20030829   |
| JP 2004248666          | A2   | 20040909 | JP 2003-303747  | 20030827   |
| PRIORITY APPLN. INFO.: |      |          | JP 2002-253169  | A 20020830 |
|                        |      |          | JP 2003-21198   | A 20030129 |

AB Peptide are provided, consisting of amino acid sequences comprising an amino acid sequence Z1X1X2X3Z2X4X5Z3X6X7X8Z4X9, where X1 -X9 are any amino acids and at least two amino acids of Z1-Z4 are basic amino acids, such that the peptides specifically act on biol. membranes of microorganisms and does not act on normal animal cell membranes. The peptides are selected from the group consisting of ALR, WALR, WGALR, RLAWG, GWALR RVL, KVL, RVG, KVG, GVR, VGR, RVA, RSV, RVS, KVS, SVK, and VSK, or an analog thereof. Screening for nucleic acids encoding a peptide capable of acting on a biol. membrane is achieved by constructing a DNA library, preparing peptides by cell-free transcription/translation, and selecting the peptides capable of specifically binding to a lipid bilayer membrane model immobilized on a solid phase such as a magnetic bead. The peptides demonstrate biol. activities in preventing putrefaction of food or industrial products, treating infectious disease, treating cancer, suppressing apoptosis, and killing microorganisms pathogenic to animals or plants (e.g., Erwinia carotovora).

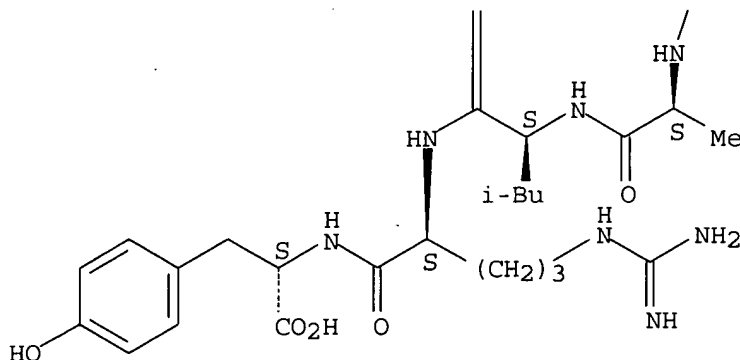
IT 678998-11-3



PAGE 2-A



PAGE 2-B



L14 ANSWER 4 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:20444 HCAPLUS

DOCUMENT NUMBER: 140:110119

TITLE: Mammalian EPO mimetic CH1 deleted mimetibodies, compositions, methods and uses for diagnosis and therapy of human diseases

INVENTOR(S): Heavner, George A.; Knight, David M.; Ghrayeb, John; Scallion, Bernard J.; Nesspor, Thomas C.; Kutoloski, Karen A.

PATENT ASSIGNEE(S): Centocor, Inc., USA

SOURCE: PCT Int. Appl., 123 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO.    | KIND   | DATE     | APPLICATION NO. | DATE     |
|---------------|--|----------|-----------------|----------|
| WO 2004002424 | A2   | 20040108 | WO 2003-US20495 | 20030630 |
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BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
 PRIORITY APPLN. INFO.: US 2002-392431P P 20020628  
 US 2002-412144P P 20020919

AB The present invention relates to at least one novel erythropoietin (EPO) human CH1-deleted mimetibody or specified portion or variant, including isolated nucleic acids that encode at least one CH1-deleted mimetibody or specified portion or variant, CH1-deleted mimetibody or specified portion or variants, vectors, host cells, transgenic animals or plants, and methods of making and using thereof, including therapeutic compns., hormones, G-CSF, GM-CSF, IL-1, leptin, CTLA4, TRAIL, TGF- $\alpha$ , and TGF- $\beta$  are the focus of this genetic engineering. The CH1 deleted mimetibody can optionally comprise at least one CH3 constant region directly linked with at least one CH2 region directly linked with at least one hinge region or fragment thereof directly linked with at least one partial V region, directly linked with an optional linker sequence, directly linked to at least one therapeutic peptide, optionally further directly linked with at least a portion of at least one variable antibody sequence. In a preferred embodiment a pair of a CH3-CH2-hinge-partial J sequence-linker-therapeutic peptide with an option N-terminal antibody sequence, the pair optionally linked by association or covalent linkage, such as, but not limited to, a Cys-Cys disulfide bond. The aim of the invention is use of the purified recombinant proteins for diagnosis or treatment of anemia, immune or autoimmune disease, cancer, or infectious diseases.

IT **268228-13-3**

RL: DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (amino acid sequence, mimetibody comprising; mammalian EPO mimetic CH1 deleted mimetibodies, compns., methods and uses for diagnosis and therapy of human diseases)

RN 268228-13-3 HCAPLUS

CN L-Serine, L-seryl-L-cysteinyl-L-tyrosyl-L- $\alpha$ -glutamyl-L-tryptophylglycyl-L-lysyl-L-leucyl-L-arginyl-L-tryptophyl-L-cysteinylglycyl-  
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 2-A

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L14 ANSWER 5 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:20438 HCAPLUS

DOCUMENT NUMBER: 140:110118

TITLE: Mammalian CH1 deleted mimetibodies, compositions, methods and uses for diagnosis and therapy of human diseases

INVENTOR(S): Heavner, George A.; Knight, David M.; Ghrayeb, John; Scallon, Bernard J.; Nesspor, Thomas C.; Kutoloski, Karen A.

PATENT ASSIGNEE(S): Centocor, Inc., USA

SOURCE: PCT Int. Appl., 129 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
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| WO 2004002417 | A2   | 20040108 | WO 2003-US20347 | 20030627 |
| WO 2004002417 | A3   | 20041104 |                 |          |

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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-392431P P 20020628

AB The present invention relates to at least one novel human CH1-deleted mimetibody or specified portion or variant, including isolated nucleic acids that encode at least one CH1-deleted mimetibody or specified portion or variant, CH1-deleted mimetibody or specified portion or variants, vectors, host cells, transgenic animals or plants, and methods of making and using thereof, including therapeutic compns., methods and devices. In one embodiment, a CH1 deleted mimetibody comprises formula:

(V1(n)-Pep(n)-Flex(n)-V2(n)-pHinge(n)-CH2(n)-CH3(n))(m), where V1 is at least one portion of an N-terminus of an Ig variable region, Pep is at least one bioactive peptide, Flex is polypeptide that provides structural flexibility by allowing the mimetibody to have alternative orientations and binding properties, V2 is at least one portion of a C-terminus of an Ig variable region, pHinge is at least a portion of an Ig variable hinge region, CH2 is at least a portion of an Ig CH2 constant region, CH3 is at least a portion of an Ig CH3 constant region, n and m can be an integer between 1 and 10. Peptides that mimic the activity of EPO, TPO, growth hormones, G-CSF, GM-CSF, IL-1ra, leptin, CTLA4, TRAIL, TGF- $\alpha$  and TGF- $\beta$  are the focus of this genetic engineering. The aim of the invention is use of the purified recombinant proteins for diagnosis or treatment of anemia, immune or autoimmune disease, cancer, or infectious

diseases.

IT 268228-13-3

RL: DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

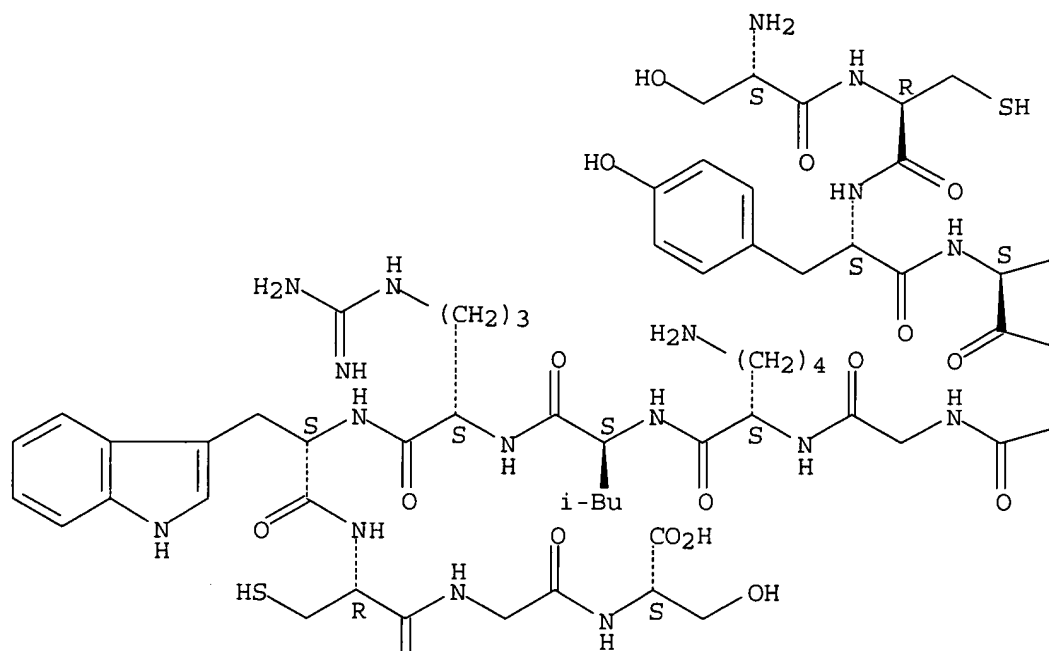
(amino acid sequence, mimetibody comprising; mammalian CH1 deleted mimetibodies, compns., methods and uses for diagnosis and therapy of human diseases)

RN 268228-13-3 HCAPLUS

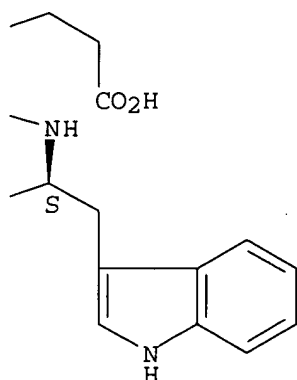
CN L-Serine, L-seryl-L-cysteinyl-L-tyrosyl-L- $\alpha$ -glutamyl-L-tryptophylglycyl-L-lysyl-L-leucyl-L-arginyl-L-tryptophyl-L-cysteinylglycyl-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



PAGE 2-A



L14 ANSWER 6 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2003:830375 HCAPLUS  
 DOCUMENT NUMBER: 139:303032  
 TITLE: Human genome-derived single exon nucleic acid probes  
 useful for analysis of gene expression in human  
 tissues  
 INVENTOR(S): Penn, Sharron Gaynor; Rank, David Russell; Hanzel,  
 David Kagen  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 80 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 9  
 PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE       |
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| US 2003194704          | A1   | 20031016 | US 2002-29386   | 20020403   |
| US 2003194704          | A1   | 20031016 | US 2002-29386   | 20020403   |
| PRIORITY APPLN. INFO.: |      |          | US 2002-29386   | A 20020403 |

AB Methods and apparatus for predicting, confirming and displaying functional regions from genomic sequence data are used to identify unique human genome-derived single exon probes useful for gene expression anal., particularly gene expression anal. by microarray. Human BAC sequences

totaling .apprx.350 Mb of sequence (.apprx.10% of the human genome) were analyzed for exons using four sep. gene finding programs (GRAIL uses a neural network, GENEFINDER uses a hidden Markoff model, DICTION operates according to a different heuristic, and GENSCAN) and Mouse comparative genomics as a fifth gene prediction method. The exons were PCR amplified from genomic DNA, verified on agarose gels, and sequenced using universal primers to validate the identity of the amplicon to be spotted in microarrays. Thus, expression, homol., and functional information are provided for 13,700 unique genome-derived single exon probes are expressed at significant levels in one or more of 8 tested tissues: human brain, heart, fetal and adult liver, placenta, lung, bone marrow, and HeLa cells. The probes lack prokaryotic and bacteriophage vector sequences, as well as lacking homopolymeric stretches of A or T. Also presented are genome-derived single exon microarrays that include such probes, peptides encoded by the exons, and antibodies thereto. In addition, methods are provided for identifying exons in a eukaryotic genome, and for assigning exons to a single gene. [This abstract record is one of nine records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.]

IT 610771-20-5 610774-96-4

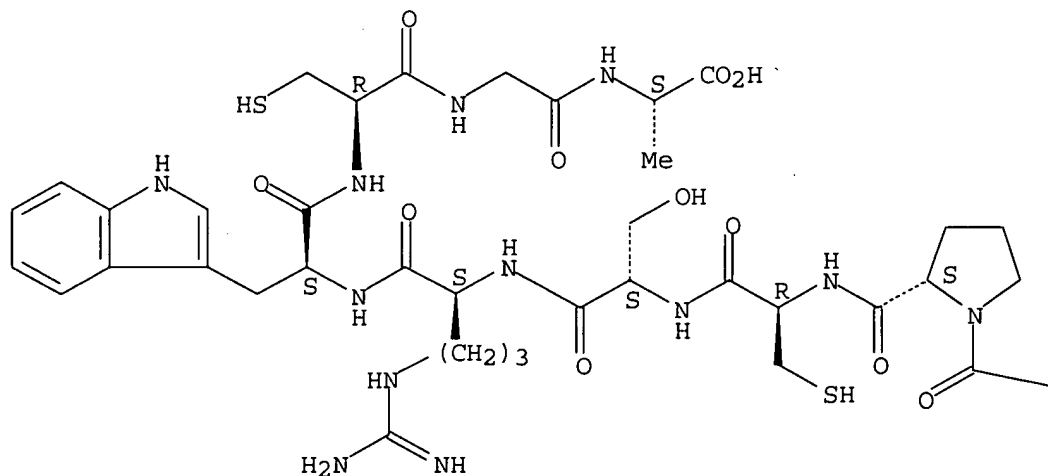
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
(amino acid sequence; human genome-derived single exon nucleic acid probes useful for anal. of gene expression in human tissues)

RN 610771-20-5 HCAPLUS

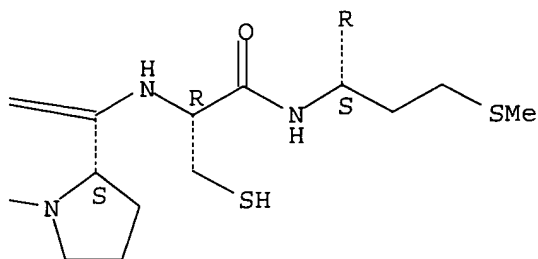
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Absolute stereochemistry.

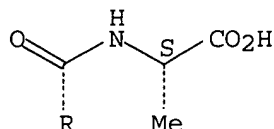
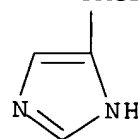
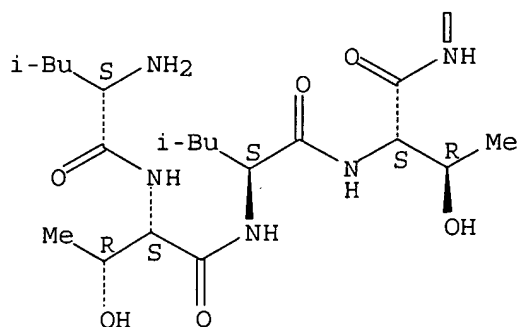
PAGE 1-A



PAGE 1-D



PAGE 2-A



L14 ANSWER 7 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:818235 HCAPLUS

DOCUMENT NUMBER: 139:322283

TITLE: Methods for production and use of mammalian complementarity determining region mimetibodies for diagnosis and therapy of human diseases

INVENTOR(S): Heavner, George A.; Knight, David M.; Scallion, Bernard J.; Ghrayeb, John

PATENT ASSIGNEE(S): Centocor, Inc., USA

SOURCE: PCT Int. Appl., 97 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|--|------|----------|-----------------|----------|
| WO 2003084477  | A2   | 20031016 | WO 2003-US9139  | 20030324 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, |      |          |                 |          |

LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,  
 PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT,  
 TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
 FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,  
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

US 2002-368791P

P 20020329

AB This invention pertains to methods for production and use of mammalian complementarity determining region (CDR) mimetibodies for diagnosis and therapy of human diseases. Genetic engineering, expression, and purification of human mimetibodies containing Ig fragments (CDR, variable, framework and/or constant region) as well as a ligand binding domain are disclosed in this invention. Peptides that mimic the activity of EPO, TPO, growth hormones, G-CSF, GM-CSF, IL-1ra, leptin, CTLA4, TRAIL, TGF- $\alpha$  and TGF- $\beta$  are the focus of this genetic engineering. The aim of the invention is use of the purified recombinant proteins for diagnosis or treatment of anemia, immune or autoimmune disease, cancer, or infectious diseases. At the time of publication, claimed sequence nos. 997 to 1109 were missing, and claimed sequence nos. 984 to 996 were not clearly identified.

IT 268228-13-3

RL: DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

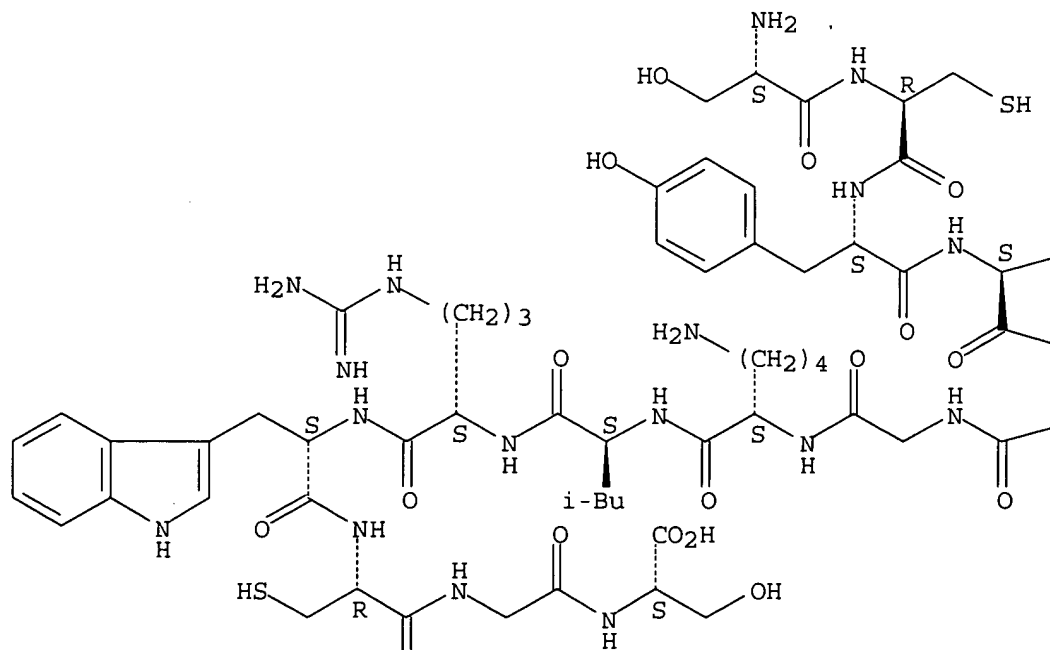
(calmodulin antagonist peptide; methods for production and use of mammalian CDR mimetibodies for diagnosis and therapy of human diseases)

RN 268228-13-3 HCAPLUS

CN L-Serine, L-seryl-L-cysteinyl-L-tyrosyl-L- $\alpha$ -glutamyl-L-tryptophylglycyl-L-lysyl-L-leucyl-L-arginyl-L-tryptophyl-L-cysteinylglycyl-  
 (9CI) (CA INDEX NAME)

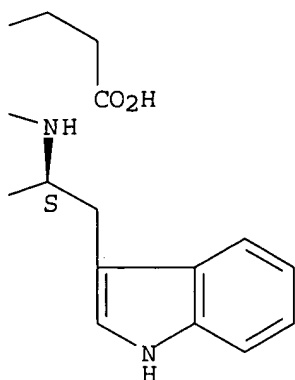
Absolute stereochemistry.

PAGE 1-A





PAGE 1-B



PAGE 2-A



L14 ANSWER 8 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2003:320039 HCAPLUS  
DOCUMENT NUMBER: 138:336417  
TITLE: Human monoclonal antibodies and fragments specific to  
GEEDLP repeats for cancer diagnosis and therapy  
INVENTOR(S): Takeuchi, Toshihiko; Dubois-Stringfellow, Nathalie;  
Murphy, John E.; Rinkenberger, Julie  
PATENT ASSIGNEE(S): Bayer Corporation, USA; Bayer Pharmaceuticals  
Corporation  
SOURCE: PCT Int. Appl., 61 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------|------|----------|-----------------|----------|
| WO 2003033674 | A2   | 20030424 | WO 2002-US33470 | 20021018 |
| WO 2003033674 | A3   | 20030821 |                 |          |

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GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL,  
PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,

US, UZ, VC, VN, YU, ZA, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
 FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF,  
 CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2003077277 A1 20030424 US 2002-273541 20021018

EP 1438339 A2 20040721 EP 2002-786449 20021018

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

PRIORITY APPLN. INFO.:

US 2001-343657P P 20011018

US 2002-377716P P 20020502

WO 2002-US33470 W 20021018

AB The invention is composed of monoclonal human MN antibodies or MN antibody fragments that target the GEEDLP repeat within the proteoglycan domain. The proteoglycan domain of the MN cell surface protein contains four of these identical GEEDLP repeats. Binding to the desired epitope is verified by competition ELISA, where ELISA signal can be attenuated by co-incubation with a peptide containing this repeat (PGEEDLPGEEDLP). This inhibition of binding can also be verified using Biacore assays, where binding of desired antibodies to immobilized MN or proteoglycan peptides can be inhibited by the peptide repeat. In addition to binding to the peptide repeat, human anti-MN antibodies can inhibit the cell adhesion of CGL-1 cells to MN coated plastic plates. Human anti-MN antibodies have been used to diagnose and quantify MN expression in cancer cells and tumors using FACS and immunohistochem. methods. An example is also provided where a human anti-MN IgG1 mediates tumor cell lysis through antibody-dependent cell-mediated cytotoxicity. Therefore, these antibodies will be useful for the treatment of cancers in which MN is upregulated or can be useful for the diagnosis of cancers in which MN is upregulated.

IT 517857-72-6P

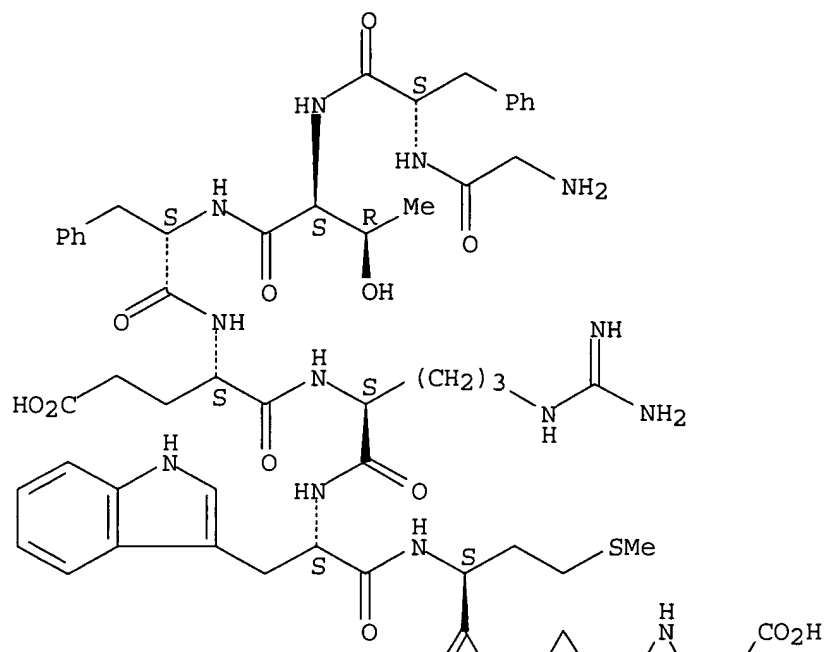
RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified);  
 DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL  
 (Biological study); PREP (Preparation); USES (Uses)  
 (human monoclonal antibodies and fragments specific to GEEDLP repeats  
 for cancer diagnosis and therapy)

RN 517857-72-6 HCAPLUS

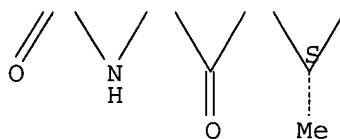
CN L-Alanine, glycyl-L-phenylalanyl-L-threonyl-L-phenylalanyl-L- $\alpha$ -  
 glutamyl-L-arginyl-L-tryptophyl-L-methionylglycyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



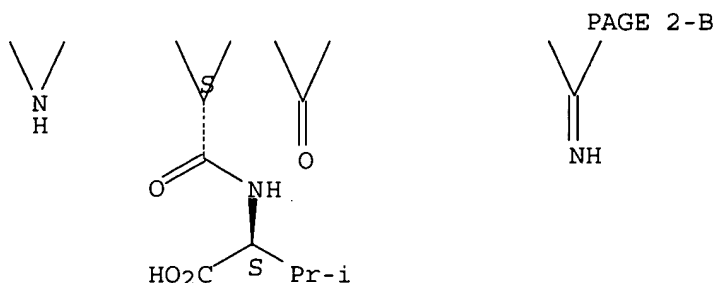
PAGE 2-A



L14 ANSWER 9 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2002:888494 HCAPLUS  
 DOCUMENT NUMBER: 137:381503  
 TITLE: Compositions and methods for modulating Dkk-mediated protein interactions and their diagnostic and therapeutic uses  
 INVENTOR(S): Allen, Kristina; Anisowicz, Anthony; Bhat, Bheem M.; Damagnez, Veronique; Robinson, John Allen; Yaworsky, Paul J.  
 PATENT ASSIGNEE(S): Genome Therapeutics Corporation, USA; Wyeth, John and Brother Ltd.  
 SOURCE: PCT Int. Appl., 376 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 4  
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE  | APPLICATION NO. | DATE  |
|------------|------|-------|-----------------|-------|
| -----      | ---- | ----- | -----           | ----- |

WO 2002092015 A2 20021121 WO 2002-US15982 20020517  
 WO 2002092015 A3 20031023  
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 CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,  
 PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,  
 UA, UG, US, UZ, VN, YU, ZA, ZM, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB,  
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 GN, GQ, GW, ML, MR, NE, SN, TD, TG  
 EP 1395285 A2 20040310 EP 2002-744162 20020517  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR  
 BR 2002009836 A 20041207 BR 2002-9836 20020517  
 US 2004038860 A1 20040226 US 2002-182936 20020802  
 PRIORITY APPLN. INFO.: US 2001-291311P P 20010517  
 US 2002-353058P P 20020201  
 US 2002-361293P P 20020304  
 WO 2002-US15982 W 20020517  
 AB The present invention provides reagents, compds., compns., and methods  
 relating to interactions of the extracellular domain of LRP5/ZMax1, HBM (a  
 variant of LRP5), and/or LRP6 with Dkk, including Dkk-1. The various  
 nucleic acids, polypeptides, antibodies, assay methods, diagnostic  
 methods, and methods of treatment of the present invention are related to  
 and impact on Dkk, LRP5, LRP6, HBM, and Wnt signaling. The invention  
 claims sequences for peptide aptamers which bind to LRP5 or Dkk-1 and  
 sequences for Dkk-1 peptides which are recognized by antibodies. HBM is a  
 Gly171Val polymorphism in LDL receptor-related protein LRP5/Zmax, which  
 has been identified as conferring a high bone mass phenotype in a  
 population of related humans. The protein dickkopf-1 (Dkk-1) is required  
 for head formation in early development and murine limb morphogenesis and  
 is reported to be an antagonist of the Wnt signaling pathway. Dkk-1  
 protein interacts with the ligand-binding domain of LRP5. Dkk-1 also  
 binds to LRP6, but the EGF repeat domains of LRP6 rather than the  
 ligand-binding domain are required for interaction. Dkk-1 is able to  
 repress LRP5-mediated Wnt signaling but not HBM-mediated Wnt signaling and  
 Dkk-1 also inhibits LRP6 activity. LRP5, LRP6, HBM, Dkk and Wnt are  
 implicated in bone and lipid cellular signaling. Thus, the present  
 invention provides reagents and methods for modulating lipid levels and/or  
 bone mass and is useful in the treatment and diagnosis of abnormal lipid  
 levels and bone mass disorders, such as osteoporosis. Examples of the  
 invention include a yeast two-hybrid screen for Dkk-1 interacting  
 proteins, generation of LRP5 polymorphism-specific antibodies and Dkk-1  
 specific antibodies, effects of exogenous Dkk-1 on Wnt-mediated signaling  
 in the Xenopus embryo assay, and effects of recombinant Dkk and Wnt3a/1 on  
 TCF-luciferase reporter gene expression in human cell lines with  
 endogenous LRP5/6.  
 IT 476153-38-5  
 RL: DGN (Diagnostic use); PRP (Properties); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)  
 (LRP5 ligand-binding domain-interacting peptide aptamer; compns. and  
 methods for modulating Dkk-mediated protein interactions and their  
 diagnostic and therapeutic uses)  
 RN 476153-38-5 HCAPLUS  
 CN L-Valine, glycyl-L-tryptophyl-L-arginyl-L-tryptophyl-L-cysteinyglycyl-L-  
 arginyl-L-cysteinyglycyl-L-alanyl-L-leucyl-L-tryptophyl-L-tryptophyl-L-  
 arginyl-L-arginyl- (9CI) (CA INDEX NAME)



L14 ANSWER 10 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2002:382316 HCAPLUS  
 DOCUMENT NUMBER: 137:16533  
 TITLE: Human genome-derived single exon nucleic acid probes  
 useful for analysis of gene expression in human lung  
 INVENTOR(S): Penn, Sharron G.; Hanzel, David K.; Chen, Wensheng;  
 Rank, David R.  
 PATENT ASSIGNEE(S): Molecular Dynamics, Inc., USA  
 SOURCE: PCT Int. Appl., 634 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 90  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|---|------|----------|-----------------|----------|
| WO 2001086003   | A2   | 20011115 | WO 2001-XF665   | 20010130 |
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| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |          |
| GB 2360284  | A1   | 20010919 | GB 2000-24263   | 20001004 |
| GB 2360284  | B2   | 20020227 |                 |          |
| GB 2361238  | A1   | 20011017 | GB 2001-15281   | 20001004 |
| GB 2361238  | B2   | 20020306 |                 |          |
| WO 2001086003   | A2   | 20011115 | WO 2001-US665   | 20010130 |
| WO 2001086003   | A3   | 20030522 |                 |          |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW                                     |      |          |                 |          |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |          |
| GB 2396351  | A1   | 20040623 | GB 2004-6165    | 20010130 |
| GB 2396351  | B2   | 20040825 |                 |          |

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| GB 2396352    | A1 | 20040623 | GB 2004-6170   | 20010130 |
| GB 2396352    | B2 | 20040825 |                |          |
| GB 2397376    | A1 | 20040721 | GB 2004-8566   | 20010130 |
| GB 2397376    | B2 | 20041201 |                |          |
| US 2002102252 | A1 | 20020801 | US 2001-827998 | 20010406 |
| US 6656700    | B2 | 20031202 |                |          |
| US 2004063134 | A1 | 20040401 | US 2003-675685 | 20030930 |

PRIORITY APPLN. INFO.:

|                 |    |          |
|-----------------|----|----------|
| US 2000-180312P | P  | 20000204 |
| US 2000-207456P | P  | 20000526 |
| US 2000-608408  | A  | 20000630 |
| US 2000-632366  | A  | 20000803 |
| US 2000-234687P | P  | 20000921 |
| US 2000-236359P | P  | 20000927 |
| GB 2000-24263   | A  | 20001004 |
| WO 2001-US665   | W  | 20010130 |
| GB 2002-16928   | A3 | 20010130 |
| GB 2002-17714   | A3 | 20010130 |
| GB 2002-18673   | A3 | 20010130 |
| US 2001-827998  | A3 | 20010406 |

AB A single exon nucleic acid microarray comprising 12,614 single exon nucleic acid probes for measuring gene expression in a sample derived from human lung cells is described. These unique exons are within longer probe sequences; sequencing confirms the exact chemical structure of each probe. Some amplicons have more than one exon, and some exons are contained in more than one amplicon. Expression, homol., and functional information are provided for the genome-derived single exon probes that are expressed significantly in human lung. Also described are 12,386 single exon nucleic acid probes and 12,011 proteins expressed in the lung and their use in methods for detecting gene expression. The genome-derived single exon nucleic acids comprise a novel type of nucleic acid microarray for verifying gene expression. In addition, methods are provided for identifying exons in a eukaryotic genome, and for assigning exons to a single gene. [This abstract record is one of nine records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.]

IT **400620-38-4**

RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)

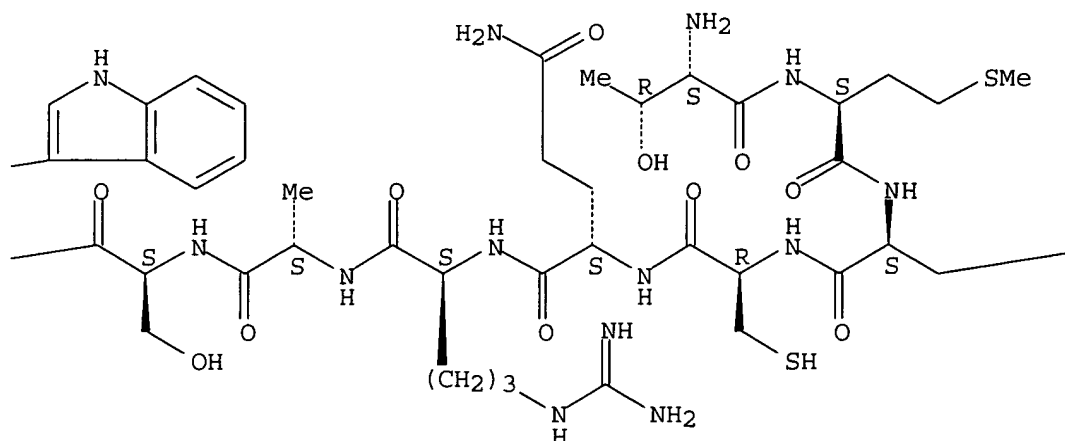
(amino acid sequence; human genome-derived single exon nucleic acid probes useful for anal. of gene expression in human lung)

RN 400620-38-4 HCAPLUS

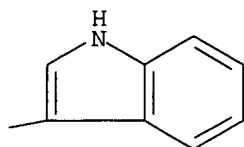
CN L-Arginine, L-threonyl-L-methionyl-L-tryptophyl-L-cysteinyl-L-glutaminy-L-arginyl-L-alanyl-L-seryl-L-tryptophyl-L-arginyl-L-threonyl-L-alanyl-L-alanyl-L-seryl-L-tryptophyl-L-arginyl-L-tryptophyl-L-methionylglycyl-L-glutaminy-L- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-C



PAGE 1-D



L14 ANSWER 11 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2002:348599 HCAPLUS  
DOCUMENT NUMBER: 137:28982  
TITLE: Human genome derived single exon nucleic acid probes  
useful for gene expression analysis  
INVENTOR(S): Penn, Sharron Gaynor; Rank, David Russell; Chen,  
Wensheng; Hanzel, David Kagen  
PATENT ASSIGNEE(S): USA  
SOURCE: U.S. Pat. Appl. Publ., 97 pp., Cont.-in-part of U.S.  
Ser. No. 774,203.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 90  
PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------|------|----------|-----------------|----------|
| US 2002048763 | A1   | 20020425 | US 2001-864761  | 20010523 |
| GB 2360284    | A1   | 20010919 | GB 2000-24263   | 20001004 |
| GB 2360284    | B2   | 20020227 |                 |          |
| GB 2361238    | A1   | 20011017 | GB 2001-15281   | 20001004 |

|   |    |          |                |          |
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| GB 2361238  | B2 | 20020306 |                |          |
| US 2002081590   | A1 | 20020627 | US 2001-774203 | 20010129 |
| WO 2001057270   | A2 | 20010809 | WO 2001-US661  | 20010130 |
| WO 2001057270   | A3 | 20030213 |                |          |
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| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  |    |          |                |          |
| WO 2001057271   | A2 | 20010809 | WO 2001-US662  | 20010130 |
| WO 2001057271   | A3 | 20030220 |                |          |
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PRIORITY APPLN. INFO.:

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| US 2000-180312P | P  | 20000204 |
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| US 2000-608408  | A2 | 20000630 |
| US 2000-632366  | A2 | 20000803 |
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| US 2000-236359P | P  | 20000927 |
| GB 2000-24263   | A  | 20001004 |
| US 2001-774203  | A2 | 20010129 |
| WO 2001-US661   | A2 | 20010130 |
| WO 2001-US662   | A2 | 20010130 |
| WO 2001-US663   | A2 | 20010130 |
| WO 2001-US664   | A2 | 20010130 |
| WO 2001-US665   | A2 | 20010130 |
| WO 2001-US666   | A2 | 20010130 |
| WO 2001-US667   | A2 | 20010130 |
| WO 2001-US668   | A2 | 20010130 |
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| WO 2001-US670   | A2 | 20010130 |
| GB 2002-16928   | A3 | 20010130 |
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| GB 2002-18673   | A3 | 20010130 |
| US 2001-266860P | P  | 20010205 |
| US 2001-827998  | A3 | 20010406 |

AB Methods and apparatus for predicting, confirming and displaying functional regions from genomic sequence data are used to identify 16,834 unique human genome-derived single exon probes useful for gene expression anal., particularly gene expression anal. by microarray. Also presented are genome-derived single exon microarrays that include such probes, peptides encoded by the exons, and antibodies thereto. The human genome-derived single-exon probes are known to be expressed in one or more human tissues or cell types, particularly human brain, heart, liver, fetal liver,placenta, lung, bone marrow, BT474 and other human mammary epithelial cells, HeLa and other human cervical epithelial cells, and HBL 100 and other human mammary epithelial cells. The invention provides a method of financing, selling and/or licensing genome-derived single-exon microarrays to customer desiring to measure gene expression, comprising: making available for computerized query or subscription service a database having a record corresponding to each genome-derived single exon microarray available for sale and/or license. [This abstract record is one of ten records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.]

IT 400620-38-4

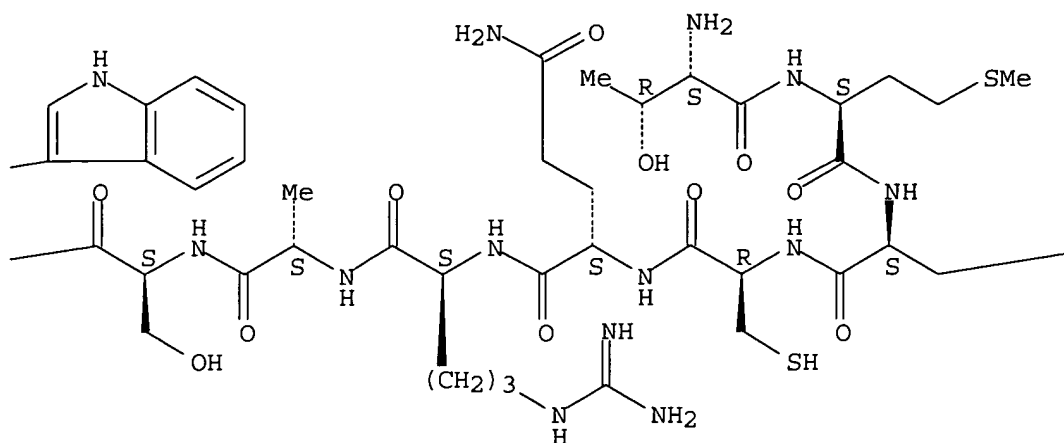
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)

(amino acid sequence; human genome derived single exon nucleic acid probes useful for gene expression anal.)

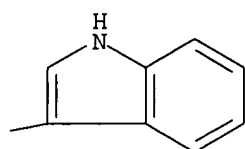
RN 400620-38-4 HCAPLUS

CN L-Arginine, L-threonyl-L-methionyl-L-tryptophyl-L-cysteinyl-L-glutaminyl-L-arginyl-L-alanyl-L-seryl-L-tryptophyl-L-arginyl-L-threonyl-L-alanyl-L-

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L14 ANSWER 12 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2002:173785 HCAPLUS  
 DOCUMENT NUMBER: 136:351355  
 TITLE: Human genome-derived single exon nucleic acid probes  
 useful for analysis of gene expression in human adult  
 liver  
 INVENTOR(S): Penn, Sharron G.; Hanzel, David K.; Chen, Wensheng;  
 Rank, David R.  
 PATENT ASSIGNEE(S): Molecular Dynamics, Inc., USA  
 SOURCE: PCT Int. Appl., 658 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 90  
 PATENT INFORMATION:

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
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| WO 2001057273  | A2   | 20010809 | WO 2001-XF664   | 20010130 |
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GW, ML, MR, NE, SN, TD, TG

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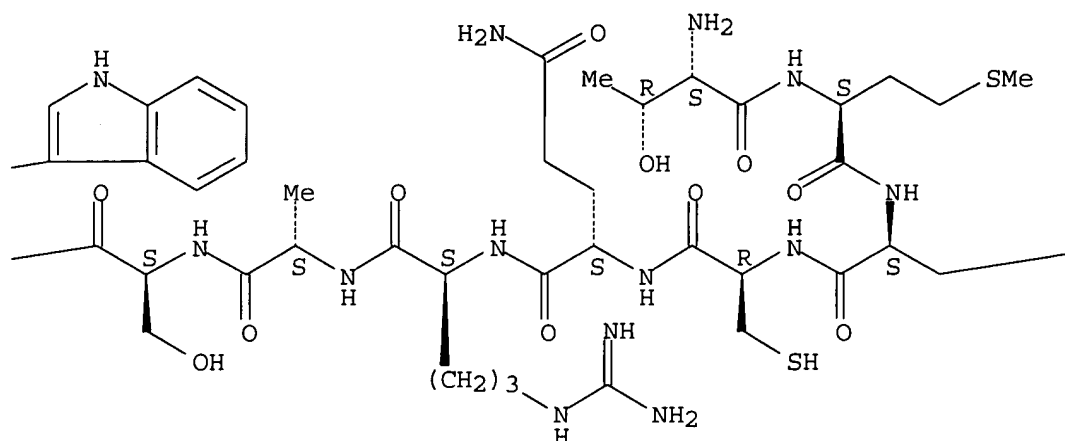
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| US 2001-827998  | A3 | 20010406 |

AB A single exon nucleic acid microarray comprising 13,109 single exon nucleic acid probes for measuring gene expression in a sample derived from human adult liver is described. These unique exons are within longer probe sequences; sequencing confirms the exact chemical structure of each probe. Some amplicons have more than one exon, and some exons are contained in more than one amplicon. Expression, homol., and functional information are provided for the genome-derived single exon probes that are expressed significantly in human adult liver cells. Also described are 12,886 single exon nucleic acid probes and 12,583 proteins expressed in the adult liver and their use in methods for detecting gene expression. The genome-derived single exon nucleic acids comprise a novel type of nucleic acid microarray for verifying gene expression. In addition, methods are provided for identifying exons in a eukaryotic genome, and for assigning exons to a single gene.

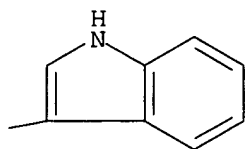
IT 400620-38-4

RL: ANT (Analyte); BSU (Biological study, unclassified); BUU (Biological

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L14 ANSWER 13 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:110620 HCAPLUS

DOCUMENT NUMBER: 136:195269

TITLE: Human genome-derived single exon nucleic acid probes useful for analysis of gene expression in human placenta

INVENTOR(S): Penn, Sharron G.; Hanzel, David K.; Chen, Wensheng; Rank, David R.

PATENT ASSIGNEE(S): Molecular Dynamics, Inc., USA

SOURCE: PCT Int. Appl., 654 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 90

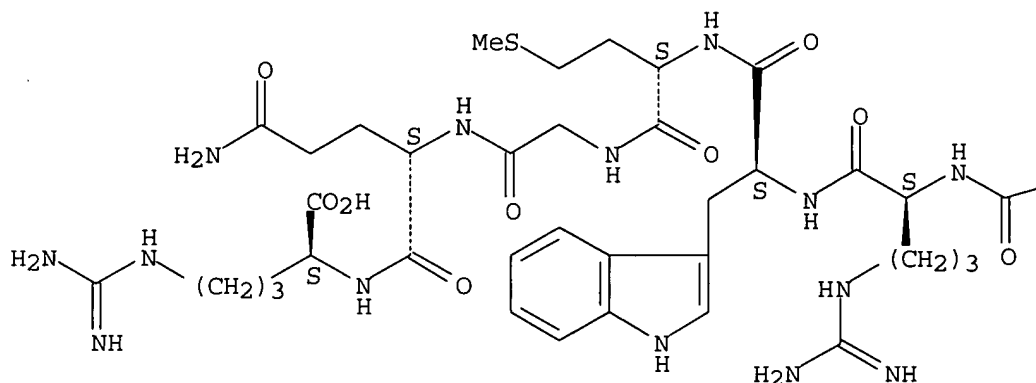
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| WO 2001057272  | A2   | 20010809 | WO 2001-XD663   | 20010130 |
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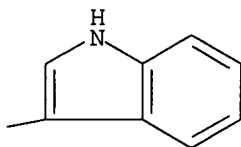
required to fully index the document and publication system constraints.]  
IT **400620-38-4**  
RL: ANT (Analyte); BSU (Biological study, unclassified); PRP (Properties);  
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(amino acid sequence; human genome-derived single exon nucleic acid  
probes useful for anal. of gene expression in human placenta)  
RN 400620-38-4 HCAPLUS  
CN L-Arginine, L-threonyl-L-methionyl-L-tryptophyl-L-cysteinyl-L-glutaminyl-L-  
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Absolute stereochemistry.

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L14 ANSWER 14 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:110610 HCAPLUS

DOCUMENT NUMBER: 136:351347

TITLE: Human genome-derived single exon nucleic acid probes  
useful for analysis of gene expression in human HeLa  
cells or other human cervical epithelial cellsINVENTOR(S): Penn, Sharron G.; Hanzel, David K.; Chen, Wensheng;  
Rank, David R.

PATENT ASSIGNEE(S): Molecular Dynamics, Inc., USA

SOURCE: PCT Int. Appl., 487 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 90

PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO.  | DATE     |
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| GB 2002-17714   | A3 | 20010130 |
| GB 2002-18673   | A3 | 20010130 |
| US 2001-827998  | A3 | 20010406 |

AB A single exon nucleic acid microarray comprising 9290 single exon nucleic acid probes for measuring gene expression in a sample derived from human HeLa cells or other human cervical epithelial cells is described. These unique exons are within longer probe sequences; sequencing confirms the exact chemical structure of each probe. Some amplicons have more than one exon, and some exons are contained in more than one amplicon. Expression, homol., and functional information are provided for the genome-derived single exon probes that are expressed significantly in human HeLa cells or other human cervical epithelial cell lines. Also described are 9102 single exon nucleic acid probes and 8549 proteins expressed in the cervical epithelial cells and their use in methods for detecting gene expression. The genome-derived single exon nucleic acids comprise a novel type of nucleic acid microarray for verifying gene expression. In addition, methods are provided for identifying exons in a eukaryotic genome, and for assigning exons to a single gene. [This abstract record is one of six records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.]

IT 400620-38-4

RL: ANT (Analyte); BUU (Biological use, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); USES (Uses)  
 (amino acid sequence; human genome-derived single exon nucleic acid probes useful for anal. of gene expression in human HeLa cells or other human cervical epithelial cells)

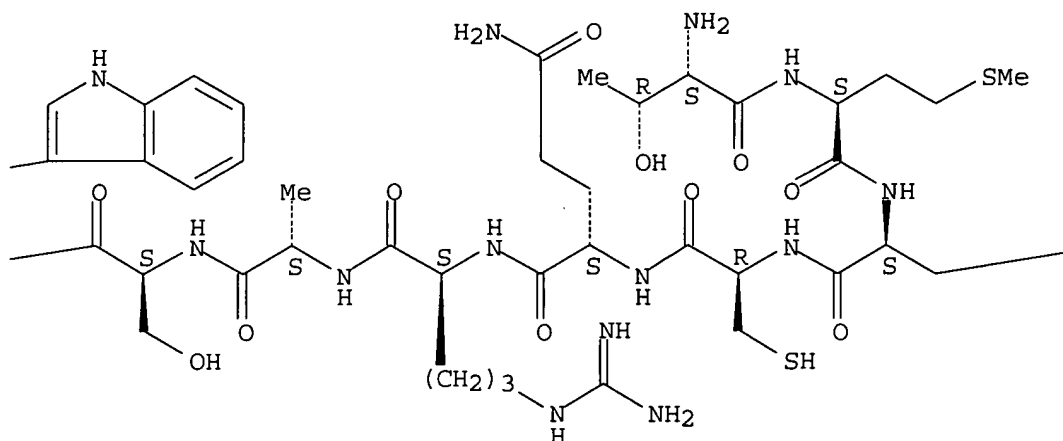
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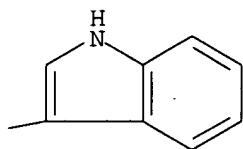
Absolute stereochemistry.



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PAGE 1-D



L14 ANSWER 15 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2002:110604 HCAPLUS  
DOCUMENT NUMBER: 136:178933  
TITLE: Human genome-derived single exon nucleic acid probes  
useful for analysis of gene expression in human fetal  
liver  
INVENTOR(S): Penn, Sharron G.; Hanzel, David K.; Chen, Wensheng;  
Rank, David R.  
PATENT ASSIGNEE(S): Molecular Dynamics, Inc., USA  
SOURCE: PCT Int. Appl., 639 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 90  
PATENT INFORMATION:

| PATENT NO.    | KIND  | DATE     | APPLICATION NO. | DATE     |
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| WO 2001057277 | A2  | 20010809 | WO 2001-XD669   | 20010130 |
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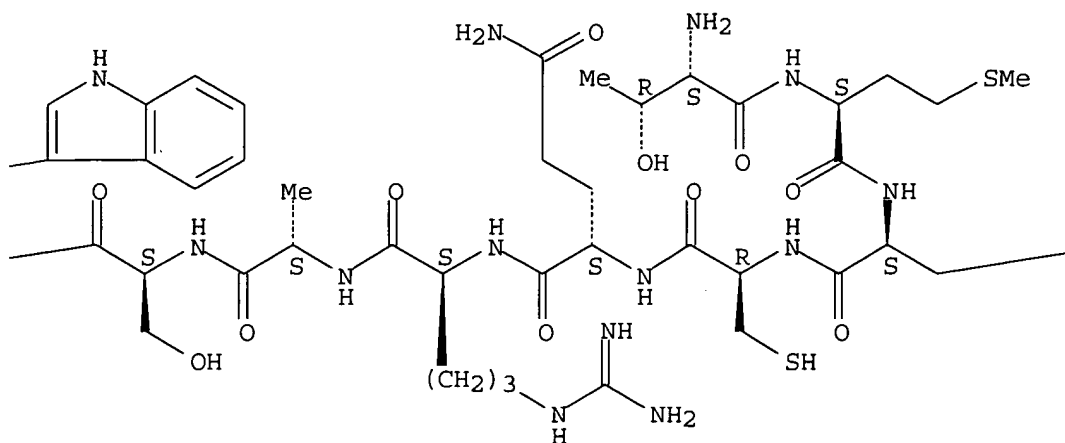
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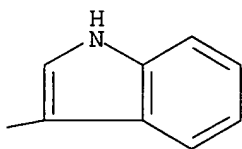
AB A single exon nucleic acid microarray comprising 12,673 single exon nucleic acid probes for measuring gene expression in a sample derived from human fetal liver cells is described. These unique exons are within longer probe sequences; sequencing confirms the exact chemical structure of each probe. Some amplicons have more than one exon, and some exons are contained in more than one amplicon. Expression, homol., and functional information are provided for the genome-derived single exon probes that are expressed significantly in human fetal liver cells. Also described are 12,456 single exon nucleic acid probes and 12,027 proteins expressed in the fetal liver and their use in methods for detecting gene expression. The genome-derived single exon nucleic acids comprise a novel type of nucleic acid microarray for verifying gene expression. In addition, methods are provided for identifying exons in a eukaryotic genome, and for assigning exons to a single gene. [This abstract record is one of nine records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.]

IT 400620-38-4

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L14 ANSWER 16 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:110588 HCAPLUS

DOCUMENT NUMBER: 136:305084

TITLE: Human genome-derived single exon nucleic acid probes useful for analysis of gene expression in human brain

INVENTOR(S): Penn, Sharron G.; Hanzel, David K.; Chen, Wensheng; Rank, David R.

PATENT ASSIGNEE(S): Molecular Dynamics, Inc., USA

SOURCE: PCT Int. Appl., 650 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 90

PATENT INFORMATION:

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|--|------|----------|-----------------|----------|
| WO 2001057275  | A2   | 20010809 | WO 2001-XD667   | 20010130 |
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| GB 2002-18673   | A3 | 20010130 |
| US 2001-827998  | A3 | 20010406 |

AB A single exon nucleic acid microarray comprising 12,821 single exon nucleic acid probes for measuring gene expression in a sample derived from human brain cells is described. These unique exons are within longer probe sequences; sequencing confirms the exact chemical structure of each probe. Some amplicons have more than one exon, and some exons are contained in more than one amplicon. Expression, homol., and functional information are provided for the genome-derived single exon probes that are expressed significantly in human brain. Also described are 12,613 single exon nucleic acid probes and 12,377 proteins expressed in the brain and their use in methods for detecting gene expression. The genome-derived single exon nucleic acids comprise a novel type of nucleic acid microarray for verifying gene expression. In addition, methods are provided for identifying exons in a eukaryotic genome, and for assigning exons to a single gene. [This abstract record is one of nine records for

this document necessitated by the large number of index entries required to fully index the document and publication system constraints.]

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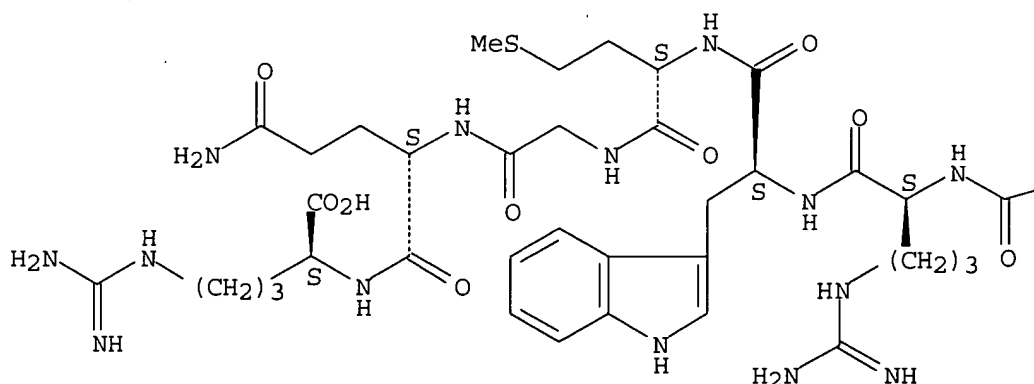
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RN 400620-38-4 HCAPLUS

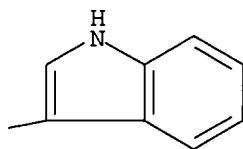
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Absolute stereochemistry.

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L14 ANSWER 17 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2002:110579 HCAPLUS  
DOCUMENT NUMBER: 136:211829  
TITLE: Human genome-derived single exon nucleic acid probes  
useful for analysis of gene expression in human bone  
marrow  
INVENTOR(S): Penn, Sharron G.; Hanzel, David K.; Chen, Wensheng;  
Rank, David R.  
PATENT ASSIGNEE(S): Molecular Dynamics, Inc., USA  
SOURCE: PCT Int. Appl., 657 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 90  
PATENT INFORMATION:

| PATENT NO.    | KIND   | DATE     | APPLICATION NO. | DATE     |
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| WO 2001057276 | A2   | 20010809 | WO 2001-XD668   | 20010130 |
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| US 2001-827998  | A3 | 20010406 |

AB A single exon nucleic acid microarray comprising 13,114 single exon nucleic acid probes for measuring gene expression in a sample derived from human bone marrow is described. These unique exons are within longer probe sequences; sequencing confirms the exact chemical structure of each probe. Some amplicons have more than one exon, and some exons are contained in more than one amplicon. Expression, homol., and functional information are provided for the genome-derived single exon probes that are expressed significantly in human bone marrow. Also described are 12,898 single exon nucleic acid probes and 12,616 proteins expressed in the bone marrow and their use in methods for detecting gene expression. The genome-derived single exon nucleic acids comprise a novel type of nucleic acid microarray for verifying gene expression. In addition, methods are provided for identifying exons in a eukaryotic genome, and for assigning exons to a single gene. [This abstract record is one of nine records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.]

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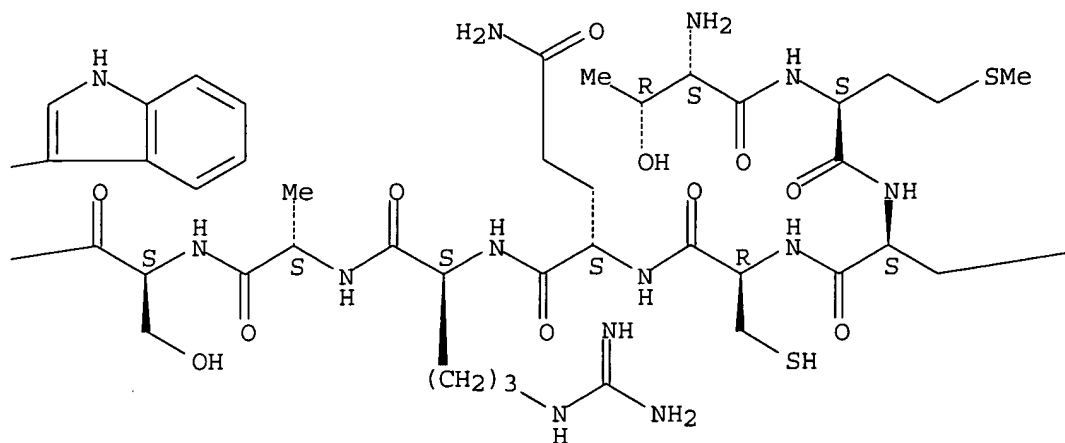
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 (amino acid sequence; human genome-derived single exon nucleic acid probes useful for anal. of gene expression in human bone marrow)

RN 400620-38-4 HCAPLUS

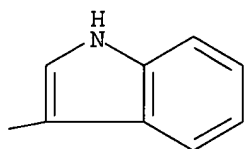
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Absolute stereochemistry.

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L14 ANSWER 18 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:64569 HCAPLUS

DOCUMENT NUMBER: 136:195264

TITLE: Human genome-derived single exon nucleic acid probes  
 useful for analysis of gene expression in human heart  
 Penn, Sharron G.; Hanzel, David K.; Chen, Wensheng;  
 Rank, David R.

PATENT ASSIGNEE(S): Molecular Dynamics, Inc., USA

SOURCE: PCT Int. Appl., 529 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 90

PATENT INFORMATION:

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
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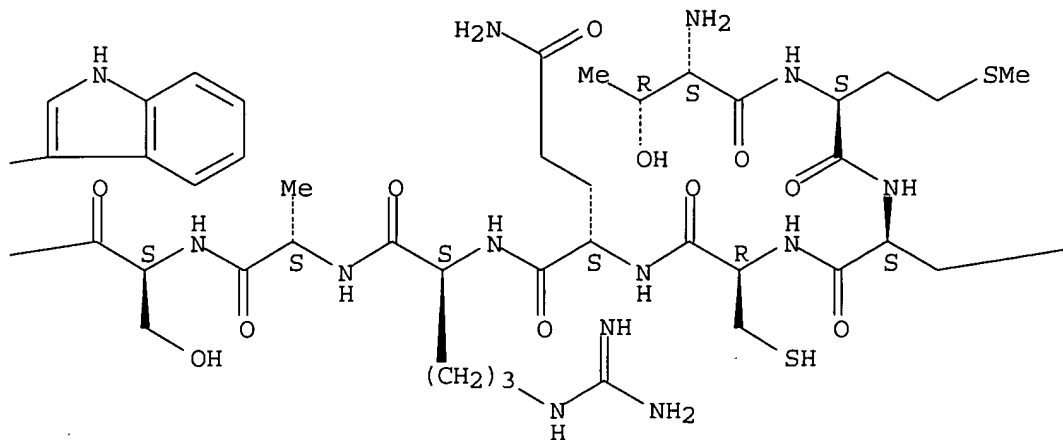
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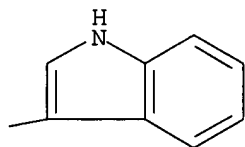
AB A single exon nucleic acid microarray comprising 9980 single exon nucleic acid probes for measuring gene expression in a sample derived from human heart is described. These unique exons are within longer probe sequences; sequencing confirms the exact chemical structure of each probe. Some amplicons have more than one exon, and some exons are contained in more than one amplicon. Expression, homol., and functional information are provided for the genome-derived single exon probes that are expressed significantly in human heart cells. Also described are 9791 single exon nucleic acid probes and 9347 proteins expressed in the heart and their use in methods for detecting gene expression. The genome-derived single exon nucleic acids comprise a novel type of nucleic acid microarray for verifying gene expression. In addition, methods are provided for identifying exons in a eukaryotic genome, and for assigning exons to a single gene. [This abstract record is one of six records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.]

IT 400620-38-4

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L14 ANSWER 19 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2001:934560 HCAPLUS  
 Correction of: 2001:582102  
 DOCUMENT NUMBER: 136:195263  
 Correction of: 135:163340  
 TITLE: Human genome-derived single exon nucleic acid probes  
 useful for analysis of gene expression in human breast  
 and BT 474 cells  
 INVENTOR(S): Penn, Sharron G.; Hanzel, David K.; Chen, Wensheng;  
 Rank, David R.  
 PATENT ASSIGNEE(S): Molecular Dynamics, Inc., USA  
 SOURCE: PCT Int. Appl., 327 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 90  
 PATENT INFORMATION:

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Searched by Mary Jane Ruhl Ext. 22524

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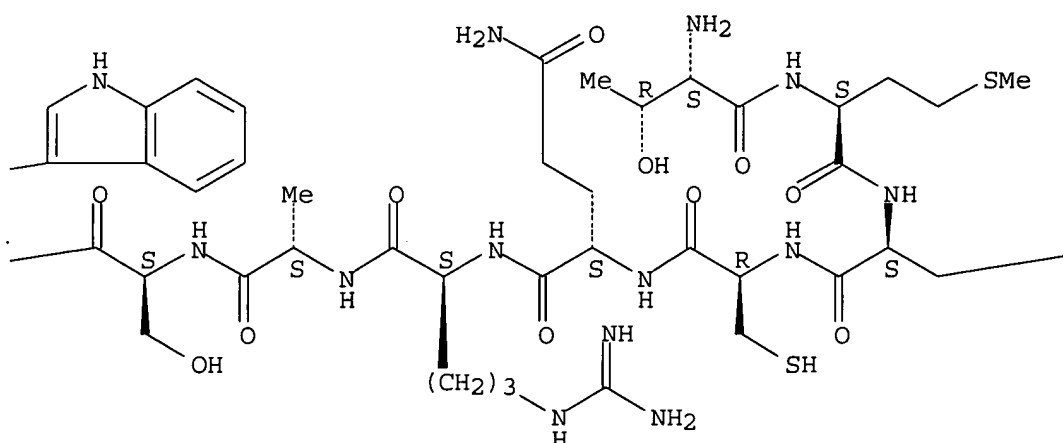
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AB A single exon nucleic acid microarray comprising 5205 single exon nucleic acid probes for measuring gene expression in a sample derived from human BT 474 cells is described. These unique exons are within longer probe sequences; sequencing confirms the exact chemical structure of each probe. Some amplicons have more than one exon, and some exons are contained in more than one amplicon. Expression, homol., and functional information are provided for the genome-derived single exon probes that are expressed significantly in human BT 474 cells. Also described are 5112 single exon nucleic acid probes and 5121 proteins expressed in the BT 474 cells and their use in methods for detecting gene expression. The genome-derived single exon nucleic acids comprise a novel type of nucleic acid microarray for verifying gene expression. In addition, methods are provided for identifying exons in a eukaryotic genome, and for assigning exons to a single gene. [This abstract record is one of three records for this document necessitated by the large number of index entries required to fully index the document and publication system constraints.]

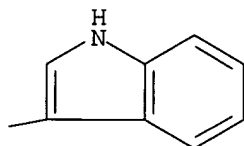
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RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)

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L14 ANSWER 20 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2001:816705 HCAPLUS  
DOCUMENT NUMBER: 135:366701  
TITLE: Fc-domain-modified peptides as therapeutic agents  
INVENTOR(S): Feige, Ulrich; Liu, Chuan-Fa; Cheetham, Janet C.;  
Boone, Thomas Charles; Gudas, Jean Marie  
PATENT ASSIGNEE(S): Amgen Inc., USA  
SOURCE: PCT Int. Appl., 176 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

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 PRIORITY APPLN. INFO.: US 2000-563286 A 20000503  
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 AB The present invention concerns fusion of Fc domains with biol. active  
 peptides and a process for preparing pharmaceutical agents using biol. active  
 peptides. In this invention, pharmacol. active compds. are prepared by a  
 process comprising: a) selecting at least one peptide that modulates the  
 activity of a protein of interest; and b) preparing a pharmacol. agent  
 comprising an Fc domain covalently linked to at least one amino acid of  
 the selected peptide. Linkage to the vehicle increases the half-life of  
 the peptide, which otherwise would be quickly degraded in vivo. The  
 preferred vehicle is an Fc domain. The peptide can be selected, for  
 example, by phage display, E.coli display, ribosome display, RNA-peptide  
 screening, yeast-based screening, chemical-peptide screening, rational  
 design, or protein structural anal.  
 IT **268228-13-3**  
 RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES  
 (Uses)  
 (Fc-domain-modified peptides as therapeutic agents)  
 RN 268228-13-3 HCAPLUS  
 CN L-Serine, L-seryl-L-cysteinyl-L-tyrosyl-L- $\alpha$ -glutamyl-L-  
 tryptophylglycyl-L-lysyl-L-leucyl-L-arginyl-L-tryptophyl-L-cysteinylglycyl-  
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.

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L14 ANSWER 21 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:780431 HCAPLUS

DOCUMENT NUMBER: 134:68132

TITLE: Melanoma-targeting properties of 99mtechnetium-labeled cyclic  $\alpha$ -melanocyte-stimulating hormone peptide analogues

AUTHOR(S): Chen, JianQing; Cheng, Zhen; Hoffman, Timothy J.; Jurisson, Silvia S.; Quinn, Thomas P.

CORPORATE SOURCE: Department of Biochemistry, University of Missouri-Columbia, Columbia, MO, 65211, USA

SOURCE: Cancer Research (2000), 60(20), 5649-5658  
CODEN: CNREA8; ISSN: 0008-5472

PUBLISHER: American Association for Cancer Research

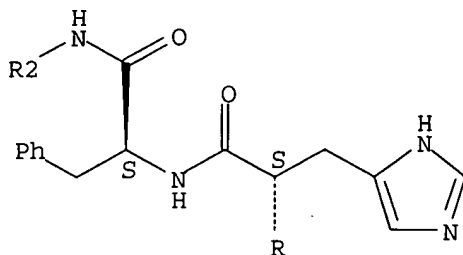
DOCUMENT TYPE: Journal

LANGUAGE: English

AB Preliminary reports have demonstrated that 99mtechnetium (Tc)-labeled cyclic [Cys3,4,10, D-Phe7] $\alpha$ -MSH3-13 (CCMSH) exhibits high tumor uptake and retention values in a murine melanoma mouse model. In this report, the tumor targeting mechanism of 99mTc-CCMSH was studied and compared with four other radiolabeled  $\alpha$ -MSH ( $\alpha$ -MSH) peptide analogs: 125I-(Tyr2)-[Nle4, D-Phe7] $\alpha$ -MSH [125I-(Tyr2)-NDP]; 99mTc-CGCG-NDP; 99mTc-Gly11-CCMSH; and 99mTc-Nle11-CCMSH. In vitro receptor binding, internalization, and cellular retention of radiolabeled  $\alpha$ -MSH analogs in B16/F1 murine cell line demonstrated that >70% of the receptor-bound radiolabeled analogs were internalized together with the receptor. Ninety % of the internalized 125I-(Tyr2)-NDP, whereas only 36% of internalized 99mTc-CCMSH, was released from the cells into the medium during a 4-h incubation at 37°C. Two mouse models, C57 mice and severe combined immunodeficient (Scid) mice, inoculated s.c. with B16/F1 murine and TXM-13 human melanoma cells were used for the in vivo studies. Tumor uptake values of 11.32 and 2.39 [% injected dose (ID)/g] for 99mTc-CCMSH at 4 h after injection, resulted in an uptake ratio of tumor:blood of 39.0 and 11.5 in murine melanoma-C57 and human melanoma-Scid mouse models, resp. Two strategies for decreasing the nonspecific kidney uptake of 99mTc-CCMSH, substitution of Lys11 in CCMSH with Gly11 or Nle11, and lysine coinjection, were evaluated. The biodistribution data for the modified peptides showed that Lys11 replacement dramatically decreased the kidney uptake, whereas the tumor uptakes of 99mTc-Nle11- and 99mTc-Gly11-CCMSH were significantly lower than that of 99mTc-CCMSH. Lysine coinjection significantly decreased the kidney uptake (e.g., from 14.6% ID/g to 4.5% ID/g at 4 h after injection in murine melanoma-C57 mice) without significantly changing the value of tumor uptake of 99mTc-CCMSH. In conclusion, the compact cyclic structure of 99mTc-CCMSH, its resistance to degradation, and its enhanced intracellular retention are the major contributing factors to the superior in vivo tumor targeting properties of 99mTc-CCMSH. Lys11 residue in 99mTc-CCMSH is critical to the tumor targeting in vivo, and lysine coinjection rather than lysine replacement can significantly decrease the nonspecific renal radioactivity accumulation without impeding the high melanoma-targeting properties of 99mTc-CCMSH. The metal-cyclized CCMSH mol. displays excellent potential for the development of melanoma-specific diagnostic and therapeutic agents.



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REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 22 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2000:291095 HCAPLUS  
 DOCUMENT NUMBER: 132:329919  
 TITLE: Modified peptides containing an antibody Fc domain as therapeutic agents  
 INVENTOR(S): Feige, Ulrich; Liu, Chuan-fa; Cheetham, Janet; Boone, Thomas Charles  
 PATENT ASSIGNEE(S): Amgen Inc., USA  
 SOURCE: PCT Int. Appl., 608 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|---|------|----------|-----------------|----------|
| WO 2000024782   | A2   | 20000504 | WO 1999-US25044 | 19991025 |
| WO 2000024782   | A3   | 20020606 |                 |          |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |          |                 |          |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |          |
| US 6660843  | B1   | 20031209 | US 1999-428082  | 19991022 |
| CA 2347131  | AA   | 20000504 | CA 1999-2347131 | 19991025 |
| EP 1144454  | A2   | 20011017 | EP 1999-971003  | 19991025 |
| EP 1144454  | A3   | 20020911 |                 |          |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO   |      |          |                 |          |
| BR 9914708  | A    | 20020716 | BR 1999-14708   | 19991025 |
| JP 2003512011   | T2   | 20030402 | JP 2000-578351  | 19991025 |
| AU 767725   | B2   | 20031120 | AU 2000-12322   | 19991025 |
| NZ 510888   | A    | 20040130 | NZ 1999-510888  | 19991025 |
| ZA 2001002753   | A    | 20020611 | ZA 2001-2753    | 20010404 |
| NO 2001001963   | A    | 20010621 | NO 2001-1963    | 20010420 |
| BG 105461   | A    | 20030430 | BG 2001-105461  | 20010424 |
| US 2004044188   | A1   | 20040304 | US 2003-609217  | 20030627 |
| US 2004053845   | A1   | 20040318 | US 2003-632388  | 20030731 |

|               |    |          |                |          |
|---------------|----|----------|----------------|----------|
| US 2004071712 | A1 | 20040415 | US 2003-645761 | 20030818 |
| US 2004057953 | A1 | 20040325 | US 2003-651723 | 20030829 |
| US 2004087778 | A1 | 20040506 | US 2003-653048 | 20030829 |
| US 2004077022 | A1 | 20040422 | US 2003-666696 | 20030919 |

PRIORITY APPLN. INFO.:

|                 |    |          |
|-----------------|----|----------|
| US 1998-105371P | P  | 19981023 |
| US 1999-428082  | A  | 19991022 |
| WO 1999-US25044 | W  | 19991025 |
| US 2000-563286  | A1 | 20000503 |

AB The present invention concerns fusion of Fc domains with biol. active peptides and a process for preparing pharmaceutical agents using biol. active peptides. In this invention, pharmacol. active compds. are prepared by a process comprising: (a) selecting at least one peptide that modulates the activity of a protein of interest; and (b) preparing a pharmacol. agent comprising an Fc domain covalently linked to at least one amino acid of the selected peptide. Linkage to the vehicle increases the half-life of the peptide, which otherwise would be quickly degraded in vivo. The preferred vehicle is an Fc domain. The peptide is preferably selected by phage display, Escherichia coli display, ribosome display, RNA-peptide screening, or chemical-peptide screening.

IT **268228-13-3D**, fusion protein with IgG1 Fc domain

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

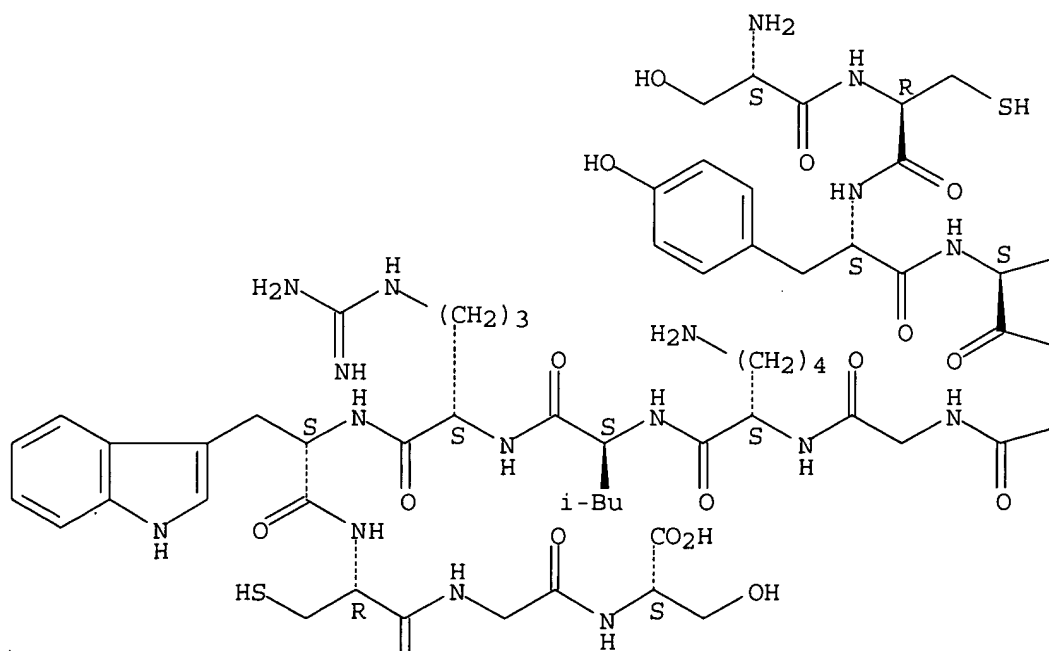
(calmodulin antagonist; modified peptides containing an antibody Fc domain as therapeutic agents)

RN 268228-13-3 HCAPLUS

CN L-Serine, L-seryl-L-cysteinyl-L-tyrosyl-L- $\alpha$ -glutamyl-L-tryptophylglycyl-L-lysyl-L-leucyl-L-arginyl-L-tryptophyl-L-cysteinylglycyl-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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L29 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:995718 HCAPLUS  
 DOCUMENT NUMBER: 141:416010  
 TITLE: Erythropoietin conjugate compounds with extended half-lives  
 INVENTOR(S): Heavner, George  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 11 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|---|------|----------|-----------------|----------|
| US 2004229318   | A1   | 20041118 | US 2003-439870  | 20030517 |
| WO 2004106373   | A1   | 20041209 | WO 2003-US15750 | 20030520 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |      |          |                 |          |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR  |      |          |                 |          |

PRIORITY APPLN. INFO.: US 2003-439870 A 20030517

AB The invention provides biol. active erythropoietin (EPO) conjugate compns. wherein EPO is covalently conjugated to a non-antigenic hydrophilic polymer covalently linked to an organic mol. that increases the circulating serum half-life of the composition The invention thus relates to EPO derivs. described by the formula EPO-(X-Y) N where EPO is erythropoietin or its pharmaceutical acceptable derivs. having biol. properties of causing **bone** marrow cells to increase production of reticulocytes and red blood cells, X is PEG or other water soluble polymers, Y is an organic mol.

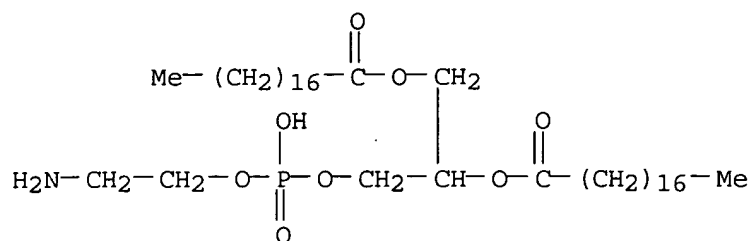
that increases the circulating half-life of the construct more than the PEG alone and N is an integer from 1 to 15. Other mols. may be included between EPO and X and between X and Y to provide the proper functionality for coupling or valency. For example, erythropoietin was conjugated to DSPE-PEG through the alpha amino group of amino acid 1 of erythropoietin, and was able to prolong the serum half-life of erythropoietin in mice shown by the high hematocrit and Hb levels.

IT 76-05-1, Trifluoroacetic acid, uses 7087-68-5, Diisopropylethylamine

RL: NUU (Other use, unclassified); USES (Uses)  
 (erythropoietin conjugates with polymers and orgs. for extended serum half-lives)

RN 76-05-1 HCAPLUS

CN Acetic acid, trifluoro- (8CI, 9CI) (CA INDEX NAME)



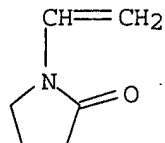
RN 9003-39-8 HCAPLUS

CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

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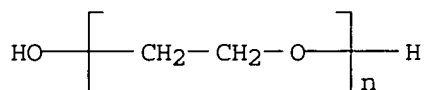
CRN 88-12-0

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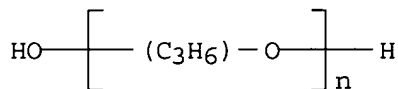
RN 25322-68-3 HCAPLUS

CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -hydro- $\omega$ -hydroxy- (9CI) (CA INDEX NAME)



RN 25322-69-4 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)],  $\alpha$ -hydro- $\omega$ -hydroxy- (9CI) (CA INDEX NAME)



L29 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1986:573063 HCAPLUS

DOCUMENT NUMBER: 105:173063

TITLE: Bursopietin

INVENTOR(S): Audhya, Tapan; Kroon, Daniel J.; **Heavner, George**; Goldstein, Gideon

PATENT ASSIGNEE(S): Ortho Pharmaceutical Corp., USA

SOURCE: U.S., 6 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO.                                    | KIND | DATE     | APPLICATION NO. | DATE     |
|---|------|----------|-----------------|----------|
| US 4584284                                    | A    | 19860422 | US 1985-681971  | 19850131 |
| AU 8652737                                    | A1   | 19860807 | AU 1986-52737   | 19860124 |
| AU 593231                                     | B2   | 19900208 |                 |          |
| ES 551399                                     | A1   | 19870516 | ES 1986-551399  | 19860129 |
| IL 77736                                      | A1   | 19900429 | IL 1986-77736   | 19860129 |
| DK 8600476                                    | A    | 19860801 | DK 1986-476     | 19860130 |
| EP 190048                                     | A2   | 19860806 | EP 1986-300631  | 19860130 |
| EP 190048                                     | A3   | 19880803 |                 |          |
| EP 190048                                     | B1   | 19920122 |                 |          |
| R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE |      |          |                 |          |
| JP 61218598                                   | A2   | 19860929 | JP 1986-16965   | 19860130 |
| ZA 8600702                                    | A    | 19870826 | ZA 1986-702     | 19860130 |
| AT 71953                                      | E    | 19920215 | AT 1986-300631  | 19860130 |
| CA 1276398                                    | A1   | 19901113 | CA 1986-500890  | 19860131 |
| US 4783442                                    | A    | 19881108 | US 1986-855011  | 19860421 |
| US 4866121                                    | A    | 19890912 | US 1988-211203  | 19880623 |

PRIORITY APPLN. INFO.:

|                |    |          |
|----------------|----|----------|
| US 1985-681971 | A  | 19850131 |
| EP 1986-300631 | A  | 19860130 |
| US 1986-855011 | A3 | 19860421 |

AB A **peptide** (H-Lys-His-Gly-NH<sub>2</sub>) was prepared by solid-phase synthesis which induced differentiation of **bone** marrow cells to B-lymphocytes (bursopoietin-like activity).

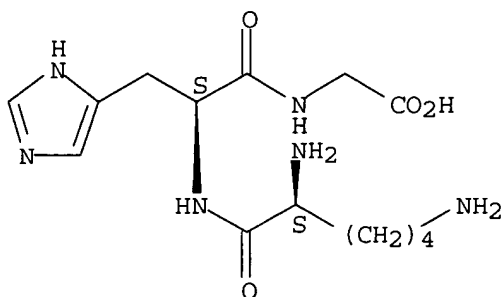
IT **104768-75-4P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 104768-75-4 HCAPLUS

CN Glycine, N-(N-L-lysyl-L-histidyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **60267-34-7P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of and B-lymphocyte differentiation response to)

RN 60267-34-7 HCAPLUS

CN Glycinamide, L-lysyl-L-histidyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

ACCESSION NUMBER: 1983:592890 HCAPLUS  
 DOCUMENT NUMBER: 99:192890  
 TITLE: Proton nuclear magnetic resonance investigation of the active site fragment of splenin, an immunoregulatory **polypeptide**  
 AUTHOR(S): Krishna, N. Rama; Heavner, George A.; Vaughn, Joseph B., Jr.  
 CORPORATE SOURCE: Compr. Cancer Cent., Univ. Alabama, Birmingham, AL, 35294, USA  
 SOURCE: Journal of the American Chemical Society (1983), 105(23), 6930-4  
 CODEN: JACSAT; ISSN: 0002-7863  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB The **peptide** fragment Arg-Lys-Glu-Val-Tyr (SP5) is the active site fragment of splenin (formerly thymopoietin III), an immunoregulatory **polypeptide** isolated from bovine spleen. An NMR investigation of the conformational properties of this active fragment in aqueous soln is reported. All the observed NH and CH resonances of SP5 were assigned by 1-dimensional and 2-dimensional NMR techniques. The variation of chemical shifts with pH, the individual amide hydrogen exchange rates, and the vicinal NH-C $\alpha$ H coupling consts. were measured. The data are compatible with the assumption of a highly motile dynamic equilibrium among different conformations, some of which are stabilized by internal H bonding involving the participation of Glu3-NH, Val4-NH, and Tyr5-NH in the **backbone** and of the guanidino N $\equiv$ H proton of the Arg1 side chain. These observations provide an insight into the conformational tendencies of SP5 in aqueous solns.

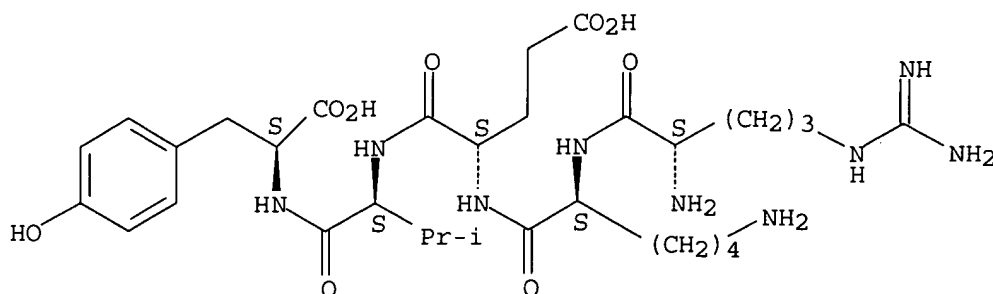
IT 75957-60-7

RL: BIOL (Biological study)  
 (as splenin active site, NMR and conformation of)

RN 75957-60-7 HCAPLUS

CN L-Tyrosine, L-arginyl-L-lysyl-L- $\alpha$ -glutamyl-L-valyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 1416-60-0

RL: BIOL (Biological study)  
 (**pentapeptide** of active site of, NMR and conformation of)

RN 1416-60-0 HCAPLUS

CN Splenin (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*